Why does there have to be drainage basins on the individual properties?

The Town of Buckeye's policy requires that each developer retain all storm water runoff from their property AND half of the fully improved street that fronts their property on their property. The basins are sized to accommodate a 100 year storm event that has a2 hour duration. The ultimate purpose is to not pass upstream property-generated runoff flows to downstream properties.

What is the purpose of the storm drain if there is drainage on our property?

There currently exists natural regional runoff flows that today that come from the north I-10 area and flow downstream ultimately into natural outflow waterways. Those existing upstream flows need to carried through the entire project as part of maintaining the original conditions.

What is access management?

Access Management is the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges and street connections to a roadway. It also involves roadway design applications, such as median treatments, auxiliary lanes and appropriate spacing of traffic signals, (Access Management Manual, Transportation Research Board-TRB, Washington DC, 2003). Access Management balances safety and access to land developments depending upon the functional classifications of the roadways within the land use areas (See Fig 1-1 Below).

SEE AN ANIMATED VERSION OF 10 PRINCIPLES OF ACCESS MANAGEMENT!!!

http://www.accessmanagement.info/10principles.html

Problems for business access are a result of inadequate coordination and land use decisions. The chain of access problems result in a cycle of operational obsolescence that can be corrected (See Fig 1-2 below).

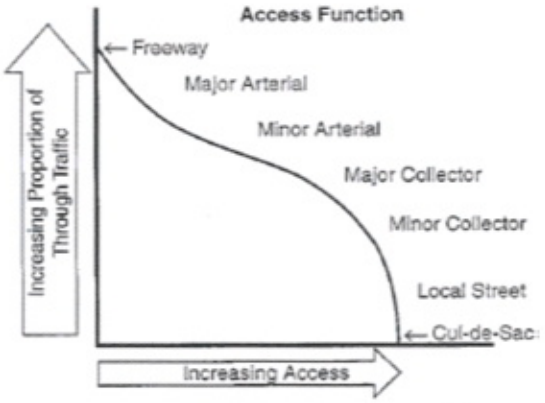


FIGURE 1-1 Conceptual roadway functional hierarchy.

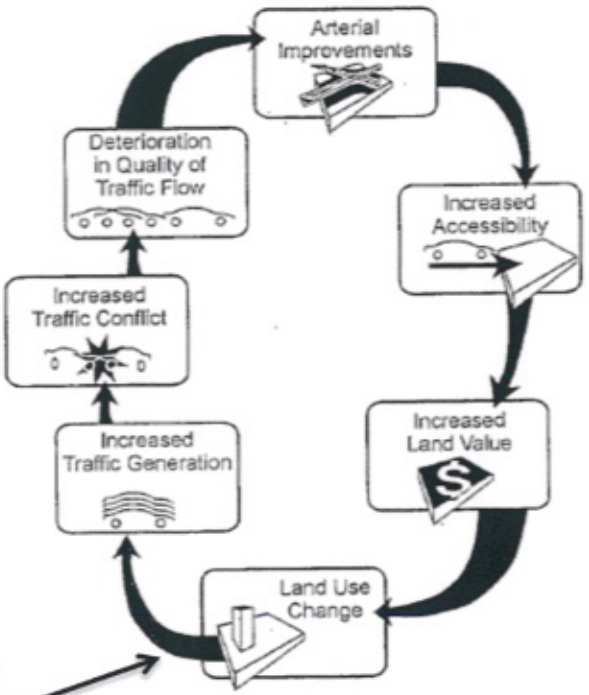


FIGURE 1-2 Transportation and land use cycle.

What is a conflict point and how does it relate to access management?

A conflict point is where a vehicle and/or pedestrian path intersect with cross traffic at a driveway or intersection in the form of merging, diverging, stopping, weaving or crossing traffic movements (See Figure 1-4 below).

The higher the number of conflict points on a roadway, the more complex the driving situation is for the driver. As the complexity increases the probability of driver mistakes also increases and when combined together, the likelihood of driver collisions is increased.

Access management separates complex conflict point areas, thereby simplifying the driver task and dramatically increases operation efficiency and fewer likely collisions, which improve the overall facility safety to its users (See Figure 1-4 below).

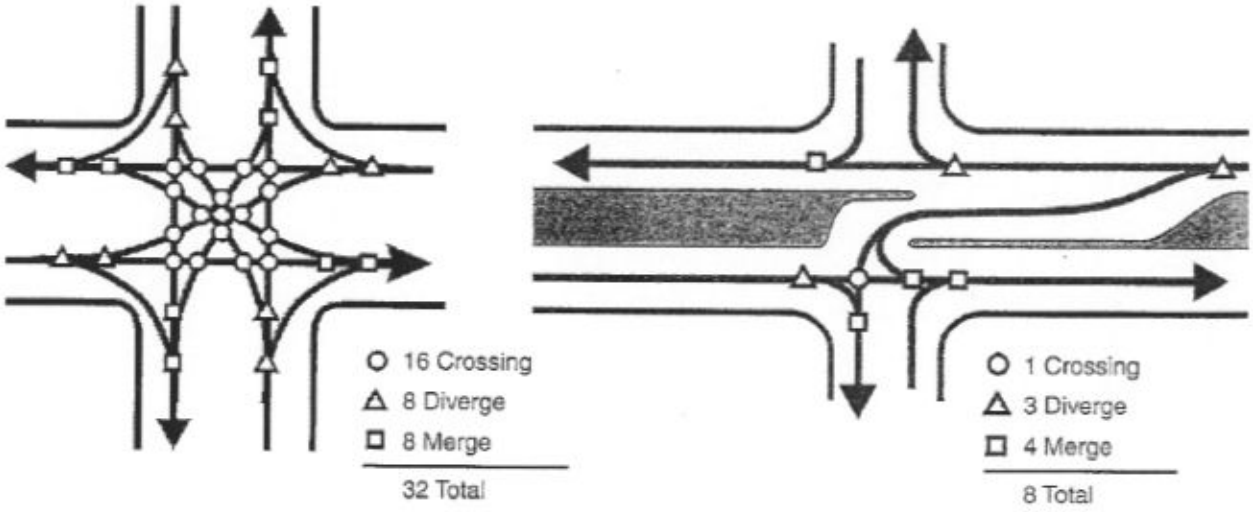


FIGURE 1-4 Vehicular conflict points at a typical four-way intersection versus a directional median opening.

Why are median islands necessary at intersections?

Medians prevent unsafe or rushed left turning vehicles from "darting" out into free flow traffic from corner businesses and it also reduces conflict points along the roadway which decrease driving complexity and collision potential. It also improves capacity of traffic flow at intersection which increases business exposure to the traveling public.

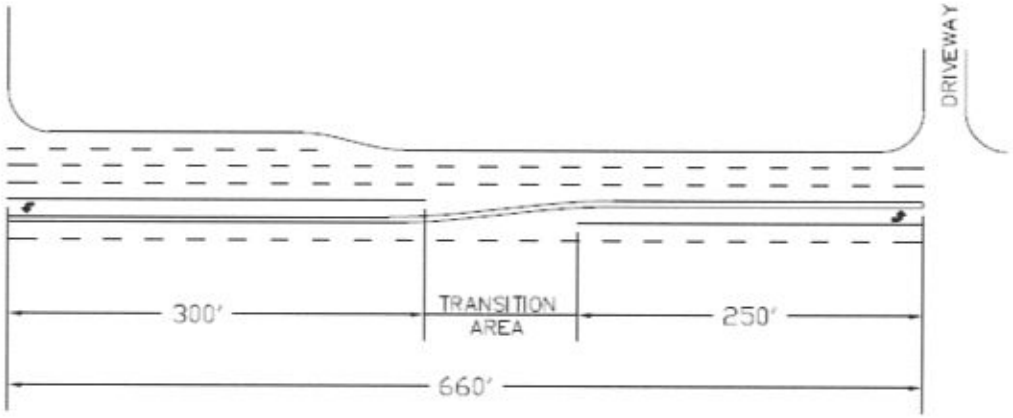
Why can't a center two-way turn lane (TWTL) be placed throughout the entire project instead of a raised median?

While a center two-way turn lane (TWTL) does provide refuge to left turning vehicles turning from driveways on to mainline roadways, it fails to limit the free movement/full access from driveways on to

mainline roadways. This free movement of a TWTL does not separate conflict points at driveway/intersection points along the roadway which increases the driver situation complexity and likelihood of collisions with other vehicles. The TWTL also allows an unsafe condition of vehicles turning left out of driveways close to intersections and stop while blocking through traffic while waiting to enter protected left turn lanes at signalized intersections.

How come median islands are required to extend 660 feet back from the intersection?

From an operational standpoint, at intersections, an acceptable left turn bay length of 300' allows for left turns to effectively clear the waiting left turning vehicles under most peak rush hour demand conditions. The first full access point at 660' enables "Back to Back" turn lanes to be constructed and be effective in servicing left turns into a development driveway at 660' (see figure below).



From a safety standpoint, a left turning vehicle out of a driveway closer than 660' can pull half way into traffic and stop blocking through lanes and/or left turn lanes while waiting for cross traffic to clear at intersections. This unsafe act increases collision potential and degrades through traffic (increases congestion). It also limits left turning driver's line of site to effectively see past stacked vehicles at an intersection in order to complete a safe left turn (see figure 8-14 below).

FIGURE 8-14 Problem resulting from an access connection located within the left-turn queue length.

Will raised medians decrease my business potential?

Improved access enables more traffic volume and more volume means more business exposure and a stable trade/business zone. The more the access points on a roadway segment, the more that traffic is impeded by turning vehicles, the more the conflict points, which result in slower traffic and longer the travel times within the area. Access management promotes a balance between traffic flow and access which promotes more business exposure and more efficient roadway operations.

SEE THE FEDERAL HIGHWAY ADMINISTRATIONS REPORT BELOW!!!
http://www.accessmanagement.info/AM2006/PrimerWeb.pdf

People will travel where they feel safe and can get to their locations with some acceptable congestion in a reasonable amount of time. However, access management can particularly have a regional benefit to business and commerce. Studies have shown that slower speeds in an area without Access management, increase traffic congestion and travel times. The travel time increase has a direct affect on business trade zone areas and, after a certain point, the trade area will shrink because of the longer travel times. Longer travel times to the public cause patrons to choose a new location to conduct business. For example, with no access management policy, adding ONE additional traffic signal on a typical arterial roadway segment with ½ mile traffic signal spacing can reduce operating speeds by over 45% resulting in the shrinkage of a business trade area by over 60% (see Figure 2-4 below).

Reduction in Average Speed	Market Area Relative to Previous Size
0%	100%
10%	81%
20%	65%
30%	45%
40%	36%
50%	25%

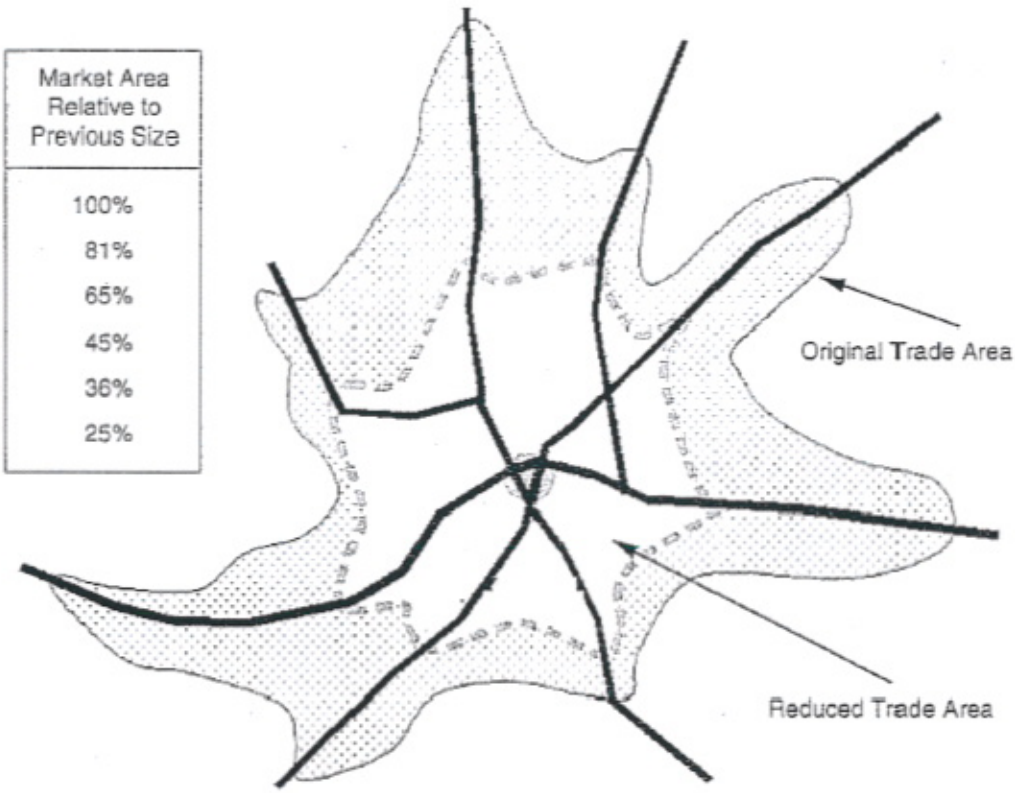


FIGURE 2-4 Effects of travel time on market area (*18*).

What standards are used for the roadway and other improvements?

The roadway standards currently used on the North Miller Road Improvement District are a combination of Town of Buckeye Policies and Maricopa County Department of Transportation (MCDOT) and Arizona Department of Transportation (ADOT). Additional improvement standards come from the Town Development and Commercial Development codes as well as Uniform Fire and National Electrical Codes.

How does the PROPOSED SR-85 Improvement District impact our project?

The SR85 Improvement District is adjacent to the North Miller Road Improvement Project to the west and will have improvements that will cover over 2 square miles of intensive commercial and industrial development. SR85 ID is connected to North Miller Road ID through Durango Street (an east-west arterial street). This critical connection between the two areas will result in more traffic past the Miller Road developments, thereby, increasing business exposure. As part of planning and design, the North Miller Road Improvement District will pay special attention to the ultimate roadway and intersection lane configurations at Durango and Miller that enables reasonable access efficient traffic circulation throughout that area.